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AF/2804

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Niimi et al

Art Unit: 2823

Serial No. 09/885,744

Examiner: Nguyen

Filed: 06/20/01

Docket: TI-32705

For: METHOD FOR ANNEALING ULTRA-THIN HIGH QUALITY GATE  
OXIDE LAYERS USING OXIDIZER/HYDROGEN MIXTURES

October 16, 2003

Commissioner For Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

AMENDMENT - 37 CFR 1.116

Sir:

Responsive to the Final Rejection of August 19, 2003, favorable reconsideration and allowance of the application are respectfully requested in view of the following comments.

The rejection of claims 1-7 and 9-13 as unpatentable over Huang et al in view of Daniel et al and Park et al is again respectfully traversed, since the references fail to disclose or suggest applicants' invention as defined by the claims. Moreover, applicants object to the **grossly inaccurate description of Huang et al** presented in the Office Action.

Fig. 2 of Huang et al 1) **does not** start with an oxide layer, 2) **does not** "subsequently" subject an oxide layer to nitridization, and 3) **does not** "subsequently" re-oxidize or anneal any such nitrided layer. These are critical flaws in the Examiner's description of Huang et al.

Fig. 4 of Huang et al 1) does not start with an oxide layer, 2) does not "subsequently" subject an oxide layer to nitridization, and 3) does not "subsequently" re-oxidize or anneal any such nitrided layer. These are critical flaws in the Examiner's description of Huang et al.

Still further, Fig. 2 of Huang et al includes **only one growth step**, wherein both oxide and nitride are formed simultaneously. There is no subsequent anneal step and no re-oxidation step. These are critical flaws in the Examiner's description of Huang et al.

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Still further, Fig. 4 of Huang et al starts with the growth of a nitride layer, followed by the growth of oxynitride on the nitride layer. There is no subsequent anneal or re-oxidation. This is clearly not the sequence claimed by applicants, and not equivalent, and not the same result.

In summary, the Huang processes ~~are not~~ what the Office Action says they are; and are grossly different from what is claimed by applicants.

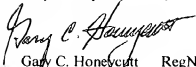
The Examiner ~~has not~~ combined Daniel et al with the Huang disclosure. Instead, the Examiner has combined Daniel with a non-existent disclosure, mistakenly attributed to Huang et al. Applicant objects to the notion that a detailed response should be required when the rejection is based upon a totally inaccurate description of the primary reference.

The Action states that it would be obvious to change the essence of Huang et al, based upon the contradictory teachings of Daniel. This is not a proper rationale for combining references. Nevertheless, if the Huang process were capable of producing ~~uniform~~ nitrogen distribution in the gate oxide, and if the Daniel teaching were effective to suggest uniformity in Huang, the **resulting process sequence** of Huang would remain the same. The sequence would still be grossly different from that claimed by applicant, as already pointed out.

Still further, the Examiner asserts that applicants' results are inherently obtained in the prior art, because "the same materials are treated in the same manner" as in applicants' invention. The facts do not support any such conclusion. The law does not accept such an argument unless all the same steps are ~~disclosed or suggested in one reference~~.

For all the above reasons, the rejection is improper and should be withdrawn.

Respectfully submitted,



Gary C. Honeycutt RegNo. 20250

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Gary C. Honeycutt 10/16/03